



BBC TELESOFTWARE

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A Beginners Guide to Telesoftware

"Telesoftware" is the term used to describe the distribution of computer programs, software and data electronically.

The BBC Telesoftware system provides a variety of services for computer owners. You can receive computer programs, word processor text files, programming utilities, computing information, TV and Radio program notes and a range of other interesting features. They are all available free!

"Teletext" is the name of the type of system that sends text using the television signal. Both BBC and IBA have a teletext system. The name for the BBC's service is "CEEFAX" (taken from SEE FACTS!), and the name of the IBA's service is "ORACLE" (which is an acronym for Optical Reception of Announcements by Coded Line Electronics!).

The BBC Telesoftware service is transmitted as part of the normal CEEFAX system, and uses BBC2 CEEFAX from page 700 onwards. Any Teletext TV set will display the Telesoftware information pages, but will not be able to make use of the software.

CEEFAX transmits information in chunks of one screenful. Each screenful is known as a page. The Telesoftware service transmits two types of pages - those designed to make sense only to your computer (sometimes called "machine-readable") and those you can read yourself (called "human-readable"). Our "human-readable" pages are in a similar style to the rest of the CEEFAX "magazine", and give you general computing information and details of the current software available on the system:

- Page 700 : The main Telesoftware "index" page
- Page 701 : General computing news and information
- Page 703 : Diary of forthcoming computer events
- Page 704 : News and reviews of products for educational use (This page is only broadcast when information is available)
- Page 710 : A list of the currently broadcast computer software for the BBC Micro
- Page 711 : Full details of each individual computer program available for this week for the BBC Micro
- Page 712 : A list of BBC software available next week
- Page 740 : A list of currently available software for the IBM and similar pc's
- Page 741 : Full details of each individual file currently available for IBM type computers
- Page 742 : A list of next week's software for machines compatible with the IBM pc.

All the above pages can also be seen using a standard Teletext television set.

The software available comes in a variety of types. Some are complete BASIC programs, some are plain text (which can be viewed directly on the computer screen, or loaded into a word processor), some are procedures from programs to be added to your own creations and some are for use with specialised equipment. In fact, they may be any type of file your computer can make use of. We refer to each separate item as a "file" irrespective of whether it is a BASIC program, text, or whatever. Information on how to use any file is given on page 711 or 741 at the time the file is transmitted.

All the files are broadcast in a "machine-readable" form, and do not make much sense if you try and read them yourself!

The process of getting your computer to read a file from the BBC's transmissions is called "Downloading". You must connect to your computer a suitable Teletext adapter (sometimes called a Telesoftware adapter or a Teletext card). It is not possible to connect your computer to a Teletext television set, or to any convertor box designed to turn a normal TV set into a Teletext TV set.

The adapter is controlled by software inside your micro or pc. This is usually in the form of a chip which plugs into the micro, or loaded from disc for the pc. There are several different makes of adapter available, and each one comes with different software to control it.

The teletext adapter will turn your computer into a Teletext TV set, with the added advantage that you are able to "download" all the free software. The adapter requires a normal television aerial. The signal from the aerial must be of a high quality - but most professionally installed domestic aerials will easily reach this standard. You can use the same monitor or TV set as your computer uses at the moment. You do not need a teletext TV set as well! If you would like further advice about the suitability of your existing aerial, please contact the BBC's Engineering Information Division at the address given on the back page.

The adapter for the BBC micro is a small, free standing unit, connected to the computer by a cable to one of the sockets underneath, and uses the auxilliary power output of the micro. A "follow-on" power plug will allow other items, such as disc drives, also to be powered from this socket, or a mains adapter is available if required. The teletext card for the IBM pc and compatible systems is a circuit board which plugs into one of the internal expansion slots inside the main unit. Once installed, all that is visible is the UHF aerial socket.

Here are a few of the ways in which a teletext adapter can be of use to you. This list is by no means exhaustive!

Once installed, you can use the Teletext system in any of several ways:-

- a. As a normal Teletext receiver. Any teletext pages from any TV channel can be selected. Each teletext page is identified by a 3-digit number. By typing in a specific page number, that page is searched for and displayed. The system offers advanced features over a normal teletext TV set (for example, being able to store several pages using the computer's memory). For more information about the BBC's Teletext service, CEEFAX, please see the back page.
- b. As a receiver for the free software. Pressing a single key will cause the computer to display a list of all the software files currently available. Just choose which one you would like, and press RETURN or ENTER. The computer will then find the required file, "download" it, and save it to disc automatically. Just a few key presses and a few minutes later your requested file will be on your disc. Don't forget, the instructions on how to use the file just received, are given on page 711 or 741 of BBC2 CEEFAX.
- c. As a source of information. Any program written in any language can ask the teletext adapter to interrogate any specific page (or pages) for the information it may need. For example, your program may need to know the current price of gold, or the time of a particular TV program, or the temperature in Southend! All of this information, and much more, can be taken directly from CEEFAX by the Teletext adapter. Programs that do this are known as "interactive" as they find the information required directly from Teletext.

Glossary:

Acorn	The manufacturers of the original BBC Microcomputer system Teletext Adapter (no longer available).
Adapter	A piece of equipment that converts the Teletext signal into data suitable for the computer.
ATS	The BBC's software used to control the Teletext adapter.
CEEFAX	The name of the BBC's teletext system.
Cycle Time	The time taken for CEEFAX to broadcast its whole magazine and start again (currently about 20 seconds).
Decoder	Another name for an adapter.
Download	The process of receiving a telesoftware file from the teletext broadcast, and loading it into your computer.
Download Time	The time taken to receive a complete file "off air".
File	A piece of computer software or data transmitted by the teletext system.
G.I.S.	The manufacturers of the current BBC Microcomputer system teletext adapter (General Information Systems), and the BBC approved teletext card for the IBM pc and compatible systems.
Human Readable	Information to be seen and understood by humans.
Interactive Program	A program that extracts information from a teletext broadcast for its own use.
Machine Code	A program written directly in the code used by the computer's micro processor.
Machine Readable	Information designed to be understood only by your computer.
Magazine	A group of individual teletext pages.
ORACLE	The name of the IBA's teletext system.
Page	One screenful of teletext information.

ROM	A "chip", usually containing a program, which plugs into a socket inside the computer.
Software	A series of instructions to be carried out by your computer (a computer program - but not necessarily written in BASIC).
Teletext	The system of transmitting text and data using the television signal.
Telesoftware	The computer data and files broadcast using the teletext system.
TFS	The software supplied by Acorn to control the teletext adapter.

Addresses:

For general information about the Telesoftware service, for our pack of information for schools, and for information about the BBC Teletext Adapter:

BBC Telesoftware
CEEFAX
BBC TV Centre
Wood Lane
London W12 7RJ

For general information about the CEEFAX service:

CEEFAX
BBC Television Centre
Wood Lane
London W12 7RJ

For information regarding aerial installations and television reception:

BBC Engineering Information Division
Broadcasting House
London W1A 1AA

To order the BBC Microcomputer system teletext adapter:

G.I.S. Ltd
Croxtion Park
Croxtion
Cambridgeshire
PE19 4SY